AMENDMENT AND REQUEST FOR CONTINUED EXAMINATION
Serial Number: 10/656,464
Filing Date: September 5, 2003
Title: High Strength Fiber/Fabric/Film Based Animal Toy

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Remarks

The Official Action mailed June 11, 2009 has been carefully considered. Claims 1-5, 8-14, 16 and 19-27 are pending in the present application. Reconsideration and allowance of the subject application, as amended, are respectfully requested. Claim 16 has been cancelled along with claims 23-27.

For starters, claim 1 have been amended to include the matter of original claim 16 wherein said high performance fibers comprise non-continuous staple fibers which have a monoaxial orientation of greater than about 50%. Support may be found at paragraph [0015] of the published U.S. application which recites"[t]he fibers of the present invention are characterized as fibers having a relatively high degree of monoaxial polymer orientation. In this context, the orientation is reference to the alignment of the polymer chains, thereby imparting enhanced tensile strength, or modulus values, as noted above. As noted, the monoaxial orientation of the fibers herein is at least 50% or higher." Accordingly, no new matter has been entered.

Claim 1 has also been amended to recite that the high performance fibers comprising non-continuous staple fiber which are blended or interwoven with non-high-performance fiber is such that the blend still reduces tearing and puncture when chewed by an animal. Support can be found at paragraph [0007] and [00012] of the published application, which discloses the blending and the fact that the benefits of the invention are still achieved (tear reduction and puncture reduction) in blends of high performance fiber with non-high performance fiber. As will be discussed below, the reference to Sullivan (U.S. 5,087,499), which was relied upon for a teaching of blending high performance fibers with non-high performance fibers, is not believed to teach such a feature.

Specifically, claims 1-5, 8-14, 16 and 19-27 stand rejected under 35 USC §103(a) as being unpatentable over Denesuk et al., U.S. Patent No. 6,196,156 in view of Jordan, U.S. Patent No. 5,226,384, Sullivan, U.S. Patent No. 5,087,499 and (newly cited) Lin et al. U.S. Patent No. 5,354,605.

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Page 2 of the *Office Action* notes that "Denesuk does not teach that at least one of the fibers should be a high strength fiber" and turns to Jordan for teaching that "high strength fibers such as aramid fibers can be used in forming covers for articles used by pets." However, Jordan does not teach "blending the [high strength] fibers with other fibers." *Office Action* page 3. Accordingly, the *Office Action* references Sullivan for teaching that "it is known in the art to blend high strength fibers with other fibers." *Office Action* page 3. Reference is made to column 3, lines 56-64 of Sullivan, which is reproduced below for the convenience of the Examiner:

"The present invention provides improvements in the art of puncture-resistant garments and the method of making these types of garments. The inventive method may use any known fibers that have puncture-resisting characteristics. Examples of these types of fibers are polyaramids, polyethylene, polypropylene, scleroproteins (silks), cotton, fiberglass, nylon, polyurethane, and combinations thereof."

As can be seen from the above, which was relied upon for teaching blends of "high strength fibers with other fibers such as cotton, silk, nylon, and polyolefins (Office Action at page 3, lines 1-2), the reference is actually teaching that the indicated fibers are all of the same type, namely, they are fibers having "puncture resisting characteristics." Accordingly, in the context of the U.S. '499 reference, apparently, the goal was to prevent "sharp needle-like penetrating objects" (see Abstract), and the indicated polymers were individually identified as meeting such requirement.

Examining the reference even more critically, in Example 1, Kevlar™ is <u>wrapped</u> around a polyester. It is not blended or interwoven. In Example 2 of the U.S. '499 reference, Kevlar™ is again wrapped around Lycra™ (polyurethane), In Example 3 Kevlar™ is wrapped around Lycra™ (polyurethane). In Example 4 Kevlar™ is woven as a cloth. In Example 5, cotton is mixed with polyester, which are not a combination of a high performance fiber (tensile strength of 50,000 psi and/or a modulus of greater than or equal to 500,000 psi) with a non-high performance fiber as recited in claim 1. Example 6 is cotton yarn with polyester, and similar comments apply. Example 7 is Kevlar™ yarn. Example 8 is knitted Kevlar™. Example 9 is Kevar™ yarn. Example 10 is cotton and polyester. Example 11 is nylon yarn.

Accordingly, not one example or teaching within the U.S. '499 reference suggests a high performance fiber (e.g. Kevlar™) blended with any other fibers. It is therefore respectfully submitted that the U.S. '499 reference does not recognize or teach or suggest the unexpected ability to blend a high performance fiber with a non-high performance fiber for an animal toy as now recited in amended claim 1.

In addition, Applicant respectfully disagrees with the statement at page 3 of the *Office Action* that "Jordan teaches employing *multiple* layers of high strength fibers for use in forming article for use by pets." To the contrary, Jordan is quite specific that the Kevlar® layer is a single sheet (column 4 line 16), sole layer (column 4 line20) or a laminate made of "a Kevlar® aramid sheet and a Mylar® polyester sheet (see Abstract and claim 1).

Applicant further notes that neither Denesuk or Jordan (as admitted by the *Office Action* at page 3) teach or render obvious a first non-woven fabric material comprising *multiple layers* of high performance non-continuous staple fibers *blended or interwoven* with non-high performance fiber material, wherein each layer may have an axis of orientation, and *wherein an axis of orientation of one layer is not aligned with an axis of orientation of an adjacent layer*. In addition to the above, it is noted that independent claim 1 recites that a second non-woven fabric material is partially disposed over the compressible material and a portion of the first non-woven fabric material.

This brings us to the reference of Lin et al, which was newly cited for the proposition that it was directed at the use of fiber arrays that were oriented relative to each other. Lin et al, in a manner similar to Sullivan '499, is only utilizing high strength fibers for the disclosed soft armor composite. In other words, Lin et al, while disclosing cross-plied network layers, does not teach the now recited <u>blend</u> of high performance and non-high performance, that still provides "an axis of orientation providing higher strength in one direction versus another direction and wherein an axis of orientation of one layer is not aligned with an axis of orientation of an adjacent layer." See amended claim 1.

Stated another way, understanding fully that the references disclosed the use of high strength fiber for "soft armor", and recognizing that fibers such as Kevlar™ were of course known, the art did not teach or suggest that one could back-off on the presence of such fibers by

blending or interweaving them with non-high performance fibers, include the feature of an axis of orientation of one layer that was not aligned with another layer, and provide a animal chew that still provided a satisfactory reduction in tearing and puncture. See again, amended claim 1.

Claims 2-5, 9-14 and 19-22 depend directly or indirectly from amended claim 1 and are believed to be similarly distinguished.

Having dealt with all the objections raised by the Examiner, it is respectfully submitted that the present application, as amended, is in condition for allowance. Thus, early allowance is earnestly solicited.

If the Examiner desires personal contact for further disposition of this case, the Examiner is invited to call the undersigned Attorney at 603.668.6560.

In the event there are any fees due, please charge them to our Deposit Account No. 50-2121.

Respectfully submitted,

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